

## ABSTRACT

### CLEAN COPY

A magnetic field sensor including an amplifier and a magnetic field element for outputting a two-phase signal according to an applied magnetic field strength. Polarities of the two phases of the signal are mutually opposite. The amplifier amplifies the signal and outputs a resulting voltage across a pair of output terminals, which are connected to both ends of a condenser. A switch makes a connection between one of the output terminals and one end of the condenser. The switch closes in a first phase of the two-phase signal and opens in a second phase. A comparator inputting voltage across both ends of the switch converts the result of the comparison, based on a predetermined voltage, into a binary output signal.